PARSONS + WHITTLEY

Reepham Observations

north

The Site

Wood Dalling Road

footpath route to Salle Village Green

Cawston Road

improve footway to connect development to Cawston Road

existing employment use

land identified for Mixed Use Residential & Employment

The Crown Public House

500m radius

750m radius

1000m radius

Town Centre

Site Location

aerial photography courtesy Google Maps

public footpath

SUSTRANS cycle route

Proposed Residential Development, Reepham for The Salle Estate

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Project :

Proposed Residential Development, Reepham

Client :

The Salle Estate

Title :

Site Location - not to scale

Date : 08-03-13

Revision Details :

road names added

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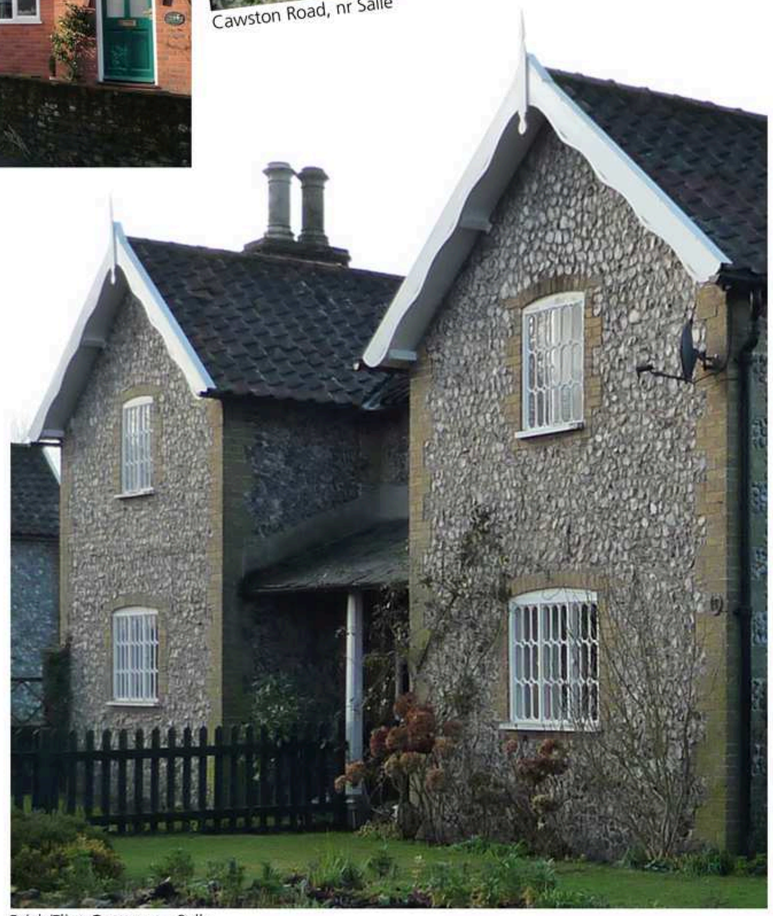
Reepham Observations

Cottages - Norwich Road

Cawston Road, nr Salle



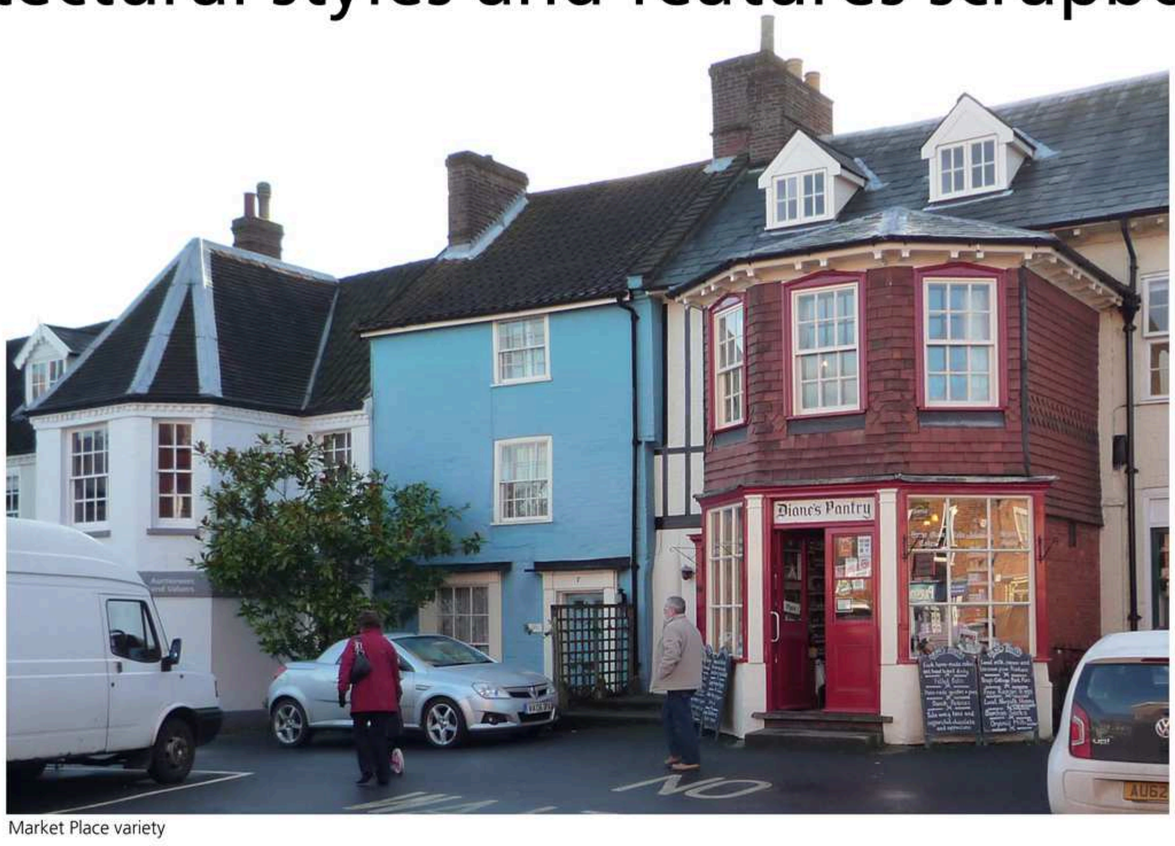
Brick/Flint Cottages - Salle

Stepped gable, Market Place

Arched window detail, nr Steward's Close

Brickwork details - Salle

Architectural styles and features scrapbook



Market Place variety

Back Street Passageway

Projecting bay window, Dereham Road

Timber frame, Back Street

Arched opening, Back Street

Mews - sytle cottage, Back Street

Proposed Residential Development, Reepham for The Salle Estate

Brick details, Dereham Road

Cawston Road, nr Salle

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Project :

Proposed Residential Development, Reepham

Client :

The Salle Estate

Title :

Observations

Date : 08-03-13
Revision Details :
layout amended

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Reepham Observations


Overton Way estate viewed from public footpath FP12

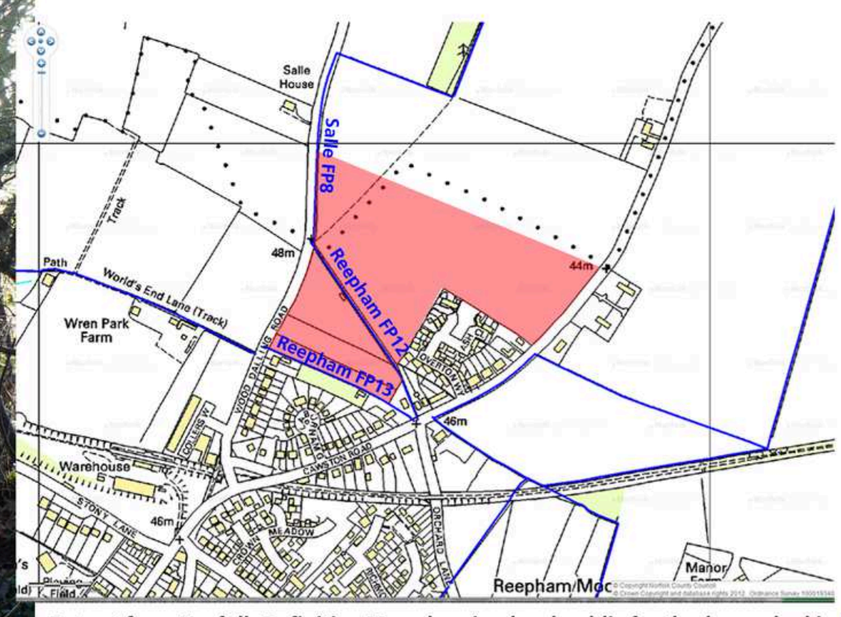

Southern portion of site viewed from Wood Dalling Road (footpath FP12 on left)


Southern portion of site viewed from Wood Dalling Road (footpath FP13 on left)


View of Overton Way estate from Cawston Road


View along public footpath FP12 looking to the exit onto Cawston Road


View along public footpath FP12 looking to the South-East



Extract from Norfolk Definitive Map showing local public footbaths marked in blue

Panoramic view across Northern portion of site looking North-East

Extract from Broadland District Council Site Allocations DPD - Shortlisted Sites 2011

View of Cawston Road looking to the North-East (hedgerow on left beyond telegraph pole defines site boundary)

Proposed Residential Development, Reepham, for The Salle Estate


Orchard Lane, looking South from Cawston Road


View of Wood Dalling Road looking East (site begins after last house on right hand side)

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Project :

Proposed Residential Development, Reepham

Client :

The Salle Estate

Title :

Site Location

Date : 14-01-13

Revision Details :

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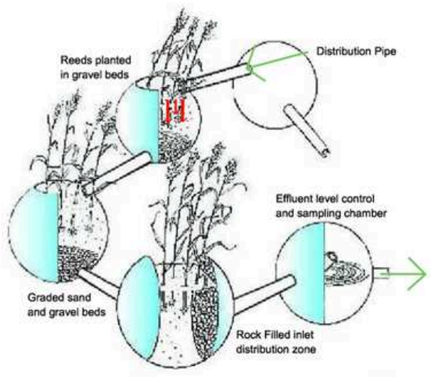
paper size : A1

Left:
Newly planted constructed wetland.
Right:
Same constructed wetland, two years later.
Below:
Typical reed-bed progression



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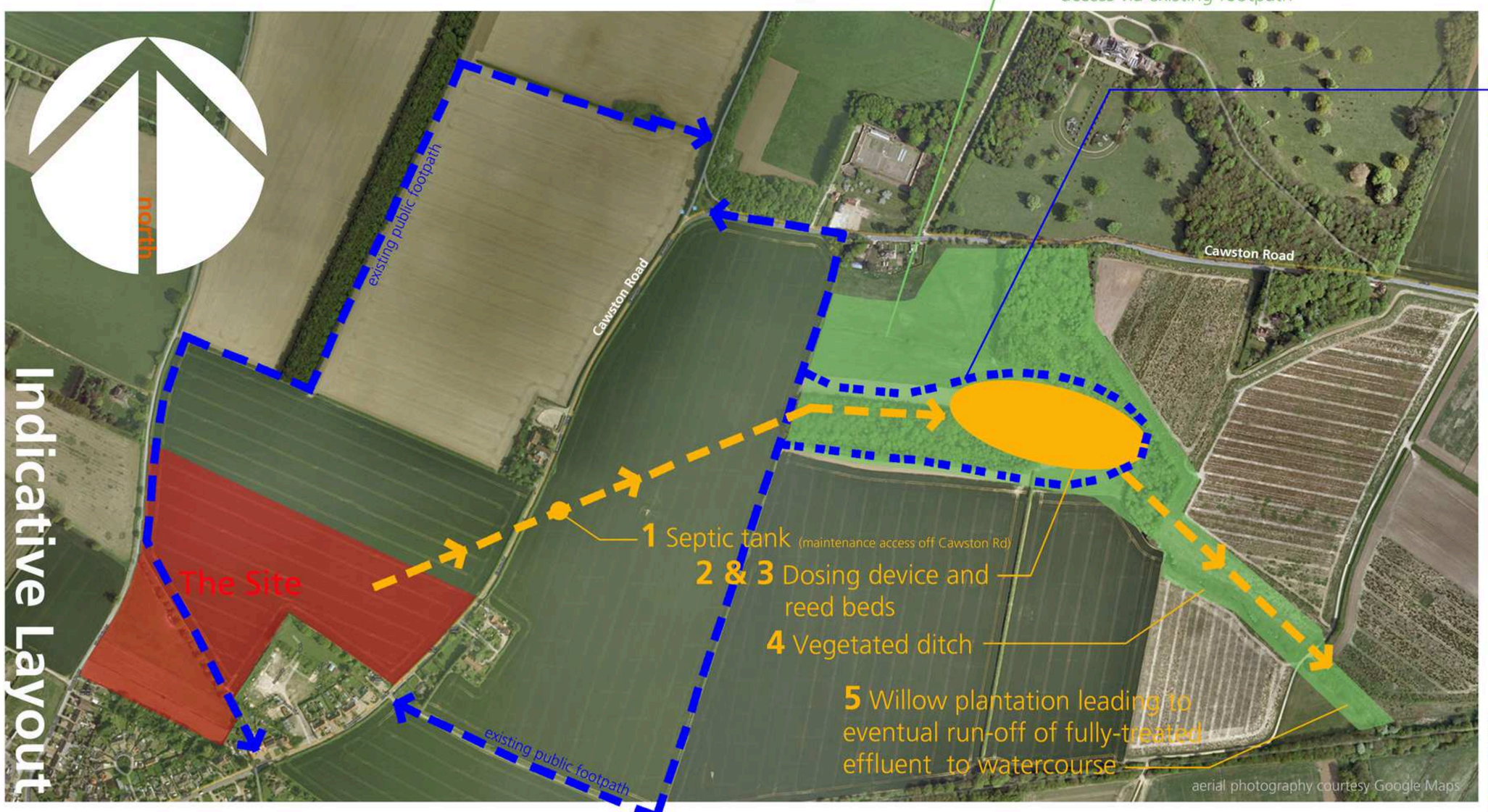
Reepham Opportunities



Indicative Layout

Footpath
Proposed extension loop to existing public footpath, around new wildlife sanctuary

Site for potential run-off treatment area, viewed from Cawston Road

Sewage, Wastewater, & Surface Water Treatment Strategy

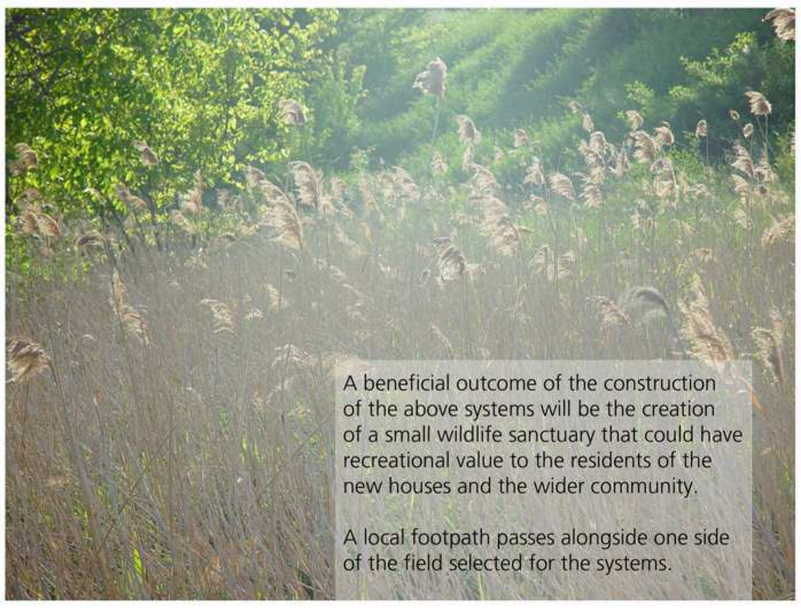
Surface Water Management

In accordance with Environment Agency surface water management requirements, and to comply with The Code for Sustainable Homes, it is intended to manage surface water runoff on site by a combination of sustainable drainage systems of swales, ditches, and soakaways.

A full site investigation will be undertaken by Consulting Engineers to confirm the underlying ground conditions prior to a planning application.

Should percolation be found to be particularly poor on the development a careful SUDs (Sustainable Urban Drainage) system will be designed by Consulting Engineers to attenuate and harvest the surface water on site and slowly disperse into the ground strata to ensure the Code for Sustainable Homes criteria are achieved.

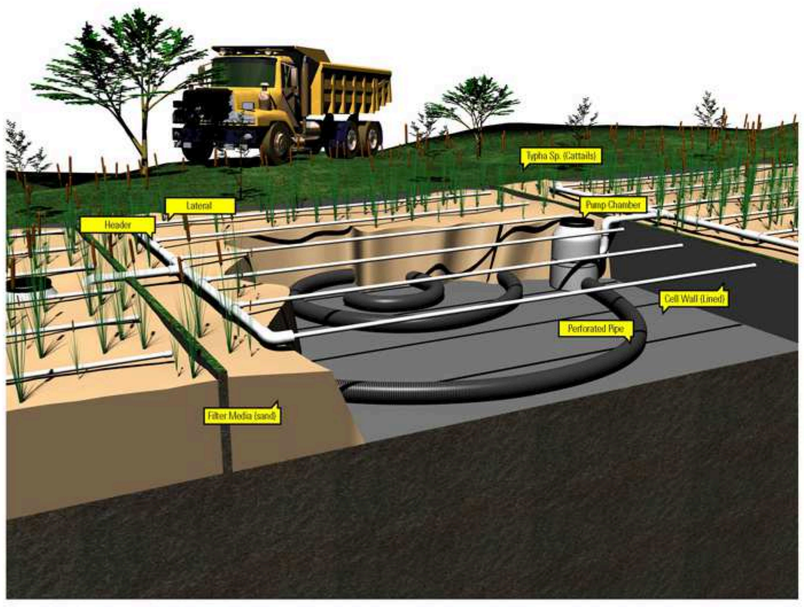
typical swales and drainage ditch installations



A beneficial outcome of the construction of the above systems will be the creation of a small wildlife sanctuary that could have recreational value to the residents of the new houses and the wider community.

A local footpath passes alongside one side of the field selected for the systems.

Below: Typical vertical reed-bed construction, used for secondary treatment of effluent



Sewage Treatment

For the complete self-contained treatment of all the sewage and wastewater from the 100 dwellings it is proposed to use a reed-bed and wetland system that will be comprised of the following in sequence:

1 A large septic/settlement tank for the separation of solids and the retention of those items of toiletries and other products that are not meant to be disposed of via the toilet. This will provide primary treatment.

2 An automatic dosing device to batch feed effluent to the surface of the reed-beds on demand. Reed species Phragmites Australis - Norfolk Reed.

3 Two Vertical Flow Reed-beds in parallel with the use of one being alternated with the other on a weekly cycle.
This will provide secondary treatment.

4 A long winding vegetated ditch (Free Water Surface - Horizontal Flow Wetland) will provide tertiary treatment and a safeguard and buffer for shock loadings.

5 A willow plantation, which the winding ditch passes through, for the removal of plant nutrients - nitrates, nitrites, and phosphates - from the treated effluent. This will use the treated effluent as a resource and convert nutrients into biomass which can be harvested to fuel woodchip boilers.

6 Discharge of a near river quality residual treated effluent to a small watercourse, a minor tributary of the River Wensum system. In the summer months the discharge of treated effluent from the system will be reduced due to loss of water from percolation into the ground, evaporation and transpiration from the plants and willows.

text courtesy of Cress Water Solutions

Phragmites Australis - 'Norfolk Reed'
Metin ARMAĞAN 1957

Proposed Residential Development, Reepham for The Salle Estate

Project :
Proposed Residential Development, Reepham

Client :
The Salle Estate

Title :
Foul and Surface Water Disposal Strategy

Date : 22-04-13
Revision Details :
Surface water details amended

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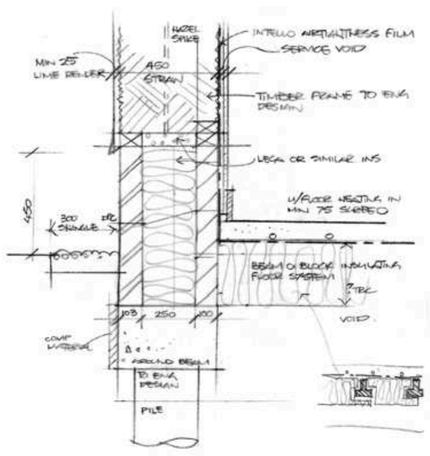
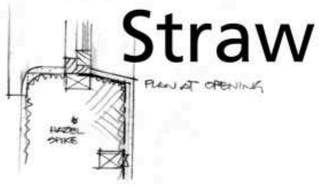
Reepham Opportunities



Straw Bale Construction



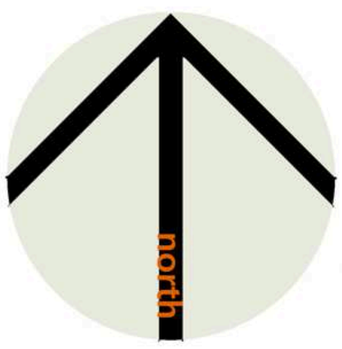
PassivHaus Energy-Saving

"Ten years ago, no-one believed us that houses can manage with less than a tenth of the heating energy used by average old buildings"

Professor Wolfgang Feist of the Passivhaus Institut, Germany

WimbishPassivhaus

Certified Passive House
Passive House Institute



Self Build

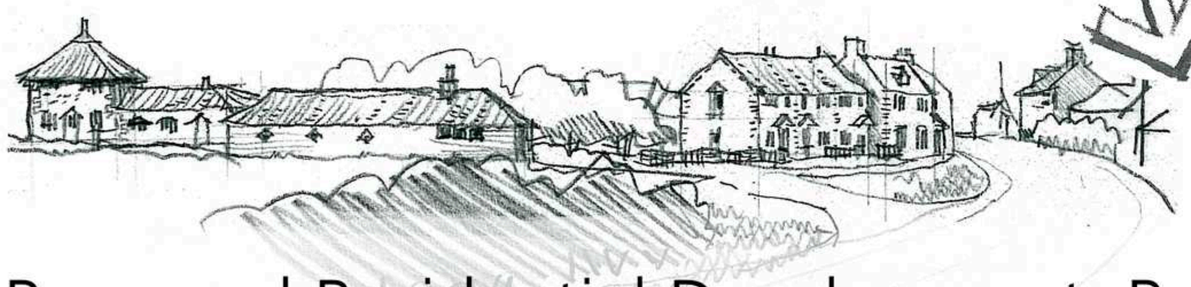
Provide self-build house plots (4)

Mix of 1, 2, 3, and 4-bedroom dwellings to a total of 100 dwellings

Lay-by for electric bus school service pick-up

Informal shared-surface road and footway, with turning heads at end of highway

Indicative Site Layout



Vernacular Details

Reflect the Local Character

Proposed Residential Development, Reepham for The Salle Estate

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Project :
Proposed Residential Development, Reepham

Client :
The Salle Estate

Title :
Possibilities

Date : 07-05-13
Revision Details :
Cawston Rd access note correction

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paper size : A1

Sustainability - Core Principles

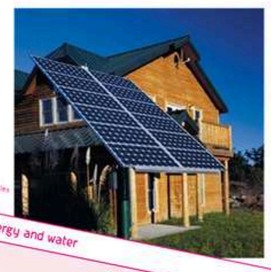
The design aspirations to be included in the development are:

Energy and CO_2 Emissions

Dwelling emission rate - To achieve a 25% Minimum Percentage Improvement in Dwelling Emission Rate over Target Emission Rate (Building Regulations Part L)
Fabric energy efficiency (M) - To improve fabric energy efficiency performance thus future-proofing reductions in CO2 for the life of the dwelling.
Energy display devices - To promote the specification of equipment to display energy consumption data, thus empowering dwelling occupants to reduce energy use.
Drying space - To promote a reduced energy means of drying clothes by providing space and equipment are provided for drying clothes
Energy labelled white goods - To promote the provision or purchase of energy efficient white goods, thus reducing the CO2 emissions from appliance use in the dwelling.
External lighting - To promote the provision of energy efficient external lighting, thus reducing CO2 emissions associated with the dwelling.
Low and zero carbon technologies - To limit CO2 emissions and running costs arising from the operation of a dwelling and its services by encouraging the specification of low and zero carbon energy sources to supply a significant proportion of energy demand.
Cycle storage - To promote the wider use of bicycles as transport by providing adequate and secure cycle storage facilities, thus reducing the need for short car journeys and the associated CO2 emissions.
Home office - To promote working from home by providing occupants with the necessary space and services thus reducing the need to commute.

We say: FABRIC FIRST!
A sustainable building cannot be reliant upon technological add-ons such as solar panels and wind turbines alone.
If the fabric of a building is not sufficient, then any energy gains generated by such technologies will merely offset the losses of the building's overall inefficiencies.
Therefore... consider Passivhaus!

CONSULTANT CERTIFIED PASSIVE HOUSE CONSULTANT



Water

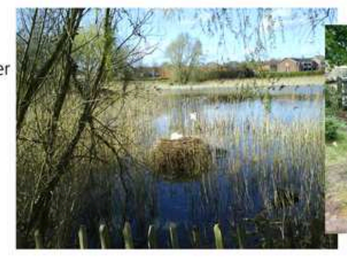
Indoor water use (M) - To reduce the consumption of potable water in the home from all sources, including borehole well water, through the use of water efficient fittings, appliances and water recycling systems, to a target Maximum Indoor Water Consumption of 105 Litres per Person per Day
External water use - To promote the recycling of rainwater and reduce the amount of mains potable water used for external water uses eg by the provision of rainwater butts.

Materials

Environmental impact of materials (M) - To specify materials with lower environmental impacts over their life-cycle.
Responsible sourcing of materials – basic building elements - To promote the specification of responsibly sourced materials for the basic building elements.
Responsible sourcing of materials – finishing elements - To promote the specification of responsibly sourced materials for the finishing elements.

Surface Water Run-off

Management of surface water run-off from developments (M) - To design surface water drainage for housing developments which avoid, reduce and delay the discharge of rainfall run-off to watercourses and public sewers using SuDS techniques. This will protect receiving waters from pollution and minimise the risk of flooding and other environmental damage in watercourses.
Flood risk - To promote housing development in low flood risk areas, or to take measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.

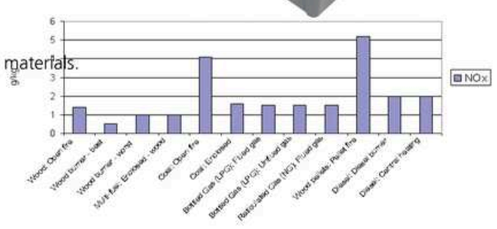


Waste

Storage of non-recyclable waste and recyclable household waste (M) - To provide adequate internal and external storage space for non-recyclable waste and recyclable household waste.
Construction site waste management - To promote resource efficiency via the effective and appropriate management of construction site waste.
Composting - To promote the provision of compost facilities to reduce the amount of household waste send to landfill.

Pollution

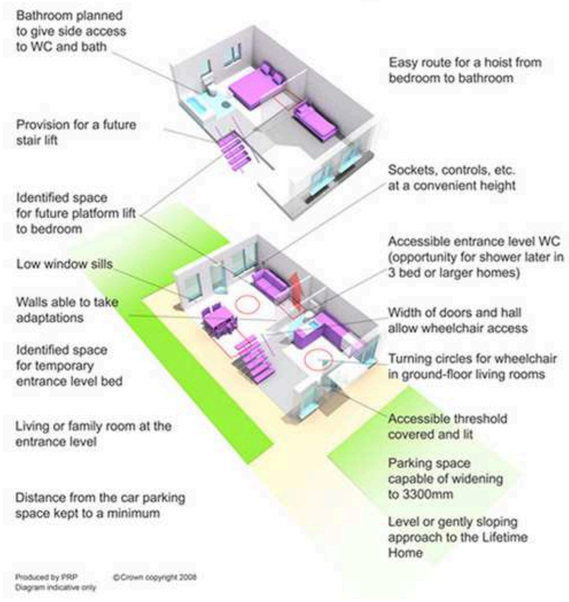
Global warming potential (GWP) of insulants - To promote the reduction of emissions of gases with high GWP associated with the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.
NOX emissions - To promote the reduction of nitrogen oxide (NOX) emissions into the atmosphere.



Health and Well-being

Daylighting - To promote good daylighting and thereby improve quality of life and reduce the need for energy to light the home.
Sound insulation - To promote the provision of improved sound insulation to reduce the likelihood of noise complaints from neighbours.
Private space - To improve quality of life by promoting the provision of an inclusive outdoor space which is at least partially private.
Lifetime Homes (M) - To promote the construction of homes that are accessible and easily adaptable to meet the changing needs of current and future occupants.

Lifetime Homes Diagram



Management

Home user guide - To promote the provision of guidance enabling occupants to understand and operate their home efficiently and make the best use of local facilities.
Considerate Constructors Scheme - To promote the environmentally and socially considerate, and accountable management of construction sites.
Construction site impacts - To promote construction sites managed in a manner that mitigates environmental impacts.
Security - To promote the design of developments where people feel safe and secure- where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.

Secured by Design
SBD
Official Police Security Initiative

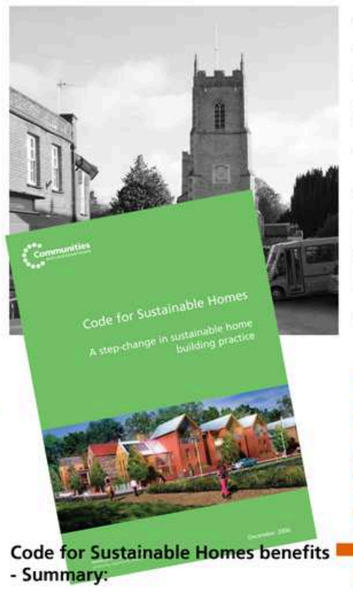
CONSIDERATE CONSTRUCTORS

Ecology

Ecological value of site - To promote development on land that already has a limited value to wildlife, and discourage the development of ecologically valuable sites.
Ecological enhancement - To enhance the ecological value of a site.
Protection of ecological features - To promote the protection of existing ecological features from substantial damage during the clearing of the site and the completion of construction works.
Change in ecological value of site - To minimise reductions and promote an improvement in ecological value.
Building footprint - To promote the most efficient use of a building's footprint by ensuring that land and material use is optimised across the development.

These are all core principles of The Code for Sustainable Homes.

PARSONS + WHITTLEY Reepham Opportunities



Code for Sustainable Homes benefits - Summary:

BENEFITS FOR THE ENVIRONMENT
Reduced greenhouse gas emissions: With minimum standards for energy efficiency at each level of the Code, there will be a reduction in greenhouse gas emissions to the environment. This will enable us to reduce the threat from climate change.
Better adaptation to climate change: The Building Regulations (Approved Document L – 2006) already limit the effects of solar gains in Summer. With minimum standards for water efficiency at each level of the Code, and other measures in the Code, including better management of surface water run-off, our future housing stock will be better adapted to cope with the impacts of climate change which are already inevitable.
Reduced impact on the environment overall: Inclusion of measures which, for example, promote the use of less polluting materials, and encourage household recycling, will ensure that our future housing stock has fewer negative impacts overall on the environment.

BENEFITS FOR HOME BUILDERS
A mark of quality: Increasing media attention and public concern over environmental issues, notably climate change, has given rise to a growing appetite among consumers for more sustainable products and services. The Code for Sustainable Homes can be used by home builders to demonstrate the sustainability performance of their homes, and to differentiate themselves from their competitors.
Regulatory certainty: The levels of performance for energy efficiency indicate the future direction of building regulations, bringing greater regulatory certainty for home builders, and acting as a guide to support effective business and investment planning.
Flexibility: The Code is based on performance which means it sets levels for sustainability performance against each element but does not prescribe how to achieve each level. Home builders can innovate to find cost-effective solutions to meet and exceed minimum requirements.

BENEFITS FOR SOCIAL HOUSING PROVIDERS
Lower running costs: Homes built to Code standard will have lower running costs through greater energy and water efficiency than homes not built to the Code standard, so helping to reduce fuel poverty. Improved comfort and satisfaction: Homes built to the Code will enhance the comfort and satisfaction of tenants. Costs may be saved in dealing with complaints.
Raised sustainability credentials: The Code will enable social housing providers to demonstrate their sustainability credentials to the public, tenants and funding bodies.

BENEFITS FOR CONSUMERS
Assisting choice: The Code will provide valuable information to homebuyers on the sustainability performance of different homes, assisting them in their choice of a new home.
Reducing environmental 'footprint': By asking for a new home which meets the Code standard, consumers will be able to encourage industry to build more sustainable homes, and reduce their own 'footprint' on the environment.
Lower running costs: Homes built to Code standard will have lower running costs through greater energy and water efficiency than homes not built to the Code standard, so helping to reduce fuel poverty.
Improved well-being: Homes built to Code standard will provide a more pleasant and healthy place to live, for example with more natural light, and adaptability for future needs.

Proposed Residential Development, Reepham for The Salle Estate

Affordable Homes

Affordable housing: Social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Eligibility is determined with regard to local incomes and local house prices. Affordable housing should include provisions to remain at an affordable price for future eligible households or for the subsidy to be recycled for alternative affordable housing provision.
Social rented housing is owned by Local Authorities and Private Registered Providers, for which guideline target rents are determined through the national rent regime. It may also be owned by other persons and provided under equivalent rental arrangements to the above, as agreed with the local authority or with the Homes and Communities Agency.
Affordable rented housing is let by local authorities or Private Registered Providers of social housing to households who are eligible for social rented housing. Affordable Rent is subject to rent controls that require a rent of no more than 80% of the local market rent (including service charges, where applicable).
Intermediate housing is homes for sale and rent provided at a cost above social rent, but below market levels subject to the criteria in the Affordable Housing definition above. These can include shared equity (shared ownership and equity loans), other low cost homes for sale and intermediate rent, but not affordable rented housing.
Homes that do not meet the above definition of affordable housing, such as "low cost market" housing, may not be considered as affordable housing for planning purposes.
The Affordable Homes Programme 2011-15 aims to increase the supply of new affordable homes in England and to deliver housing that meets local priorities and meets the housing needs of all sections of our communities.

In accordance with Policy 4:Housing Delivery of the Joint Core Strategy, this development will provide 33% affordable housing in a tenure mix to assist with local needs.

Registered Provider This legal definition has replaced the previously recognised term of Registered Social Landlord (RSL) and in line with its predecessor, it incorporates most Housing Associations. However to address a changing world, the new definition explicitly allows both profit and non-profit making social housing providers to be registered (with the Tenant Services Agency).

RIBA
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Project :
Proposed Residential Development, Reepham

Client :
The Salle Estate

Title :
Sustainability & Affordable |Housing

Date : 08-03-13
Revision Details :

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